

CLAIMS

The invention is claimed as follows:

1. An anode, comprising:
an anode collector;
5 an anode active material layer which is provided on the anode collector, and
which is alloyed with the anode collector on at least a portion of interface between the
anode active material layer and the anode collector; and
a layer including silicon oxide having a thickness of about 50 nm or more
wherein the layer is provided on the anode active material layer.
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2. An anode, comprising:
an anode collector;
an anode active material layer which is formed on the anode collector by at
least one method selected from the group consisting of a vapor-phase method, a liquid
15 phase method, and a sinter method; and
a layer including silicon oxide having a thickness of about 50 nm or more
wherein the layer is provided on the anode active material layer.
3. The anode according to claim 2, wherein the anode active material layer
20 is alloyed with the anode collector on at least a portion of interface between the anode
active material layer and the anode collector.
4. The anode according to claim 2, wherein the anode active material layer
includes at least one type of a simple substance and compounds of silicon (Si).
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5. The anode according to claim 2, wherein the layer including silicon
oxide includes silicon dioxide.
6. A battery, comprising a cathode, an anode, and an electrolyte; wherein
30 the anode comprises an anode collector, an anode active material layer which
is provided on the anode collector, and which is alloyed with the anode collector on at
least a portion of interface between the anode active material layer and the anode

collector, and a layer including silicon oxide having a thickness of about 50 nm or more which is provided on the anode active material layer.

- 5 7. A battery, comprising a cathode, an anode, and an electrolyte; wherein the anode comprises an anode collector, anode active material layer which is formed on the anode collector by at least one method selected from the group consisting of a vapor-phase method, a liquid phase method, and a sinter method, and a layer including silicon oxide having a thickness of about 50 nm or more wherein the layer is provided on the anode active material layer.
- 10 8. The battery according to claim 7, wherein the anode active material layer is alloyed with the anode collector on at least portion of interface between the anode active material layer and the anode collector.
- 15 9. The battery according to claim 7, wherein the anode active material layer includes at least one type of a simple substance and compounds of silicon (Si).
10. The battery according to claim 7, wherein the layer including silicon oxide includes silicon dioxide.
- 20 11. The battery according to claim 7, wherein the electrolyte includes a holding body, a solvent, and an electrolytic salt.
12. The battery according to claim 7, further comprising one or more film exterior members that house the cathode, the anode, and the electrolyte.
- 25 13. The battery according to claim 7, wherein the cathode contains a metal complex oxide including lithium.